WHAT IS CLAIMED IS:

1) A process for the decomposition of N_2O to N_2 and O_2 carried out at a temperature of between 700 and 1 000°C and at a high HSV, characterized in that it is carried out in the presence of a catalyst composed of a mixed oxide of zirconium and of cerium predominantly existing in the form of a solid solution.
2) The process as claimed in claim 1, characterized in that the catalyst exhibits an effective specific surface of greater than 25 m^2/g.
3) The process as claimed in claim 1, characterized in that the ZrO_2/CeO_2 ratio by weight in the catalyst is between 80/20 and 20/80 and preferably between 70/30 and 30/70.
4) The process as claimed in one of claims 1 to 3, characterized in that the catalyst also comprises yttrium.
5) The process as claimed in one of claims 1 to 4, characterized in that the specific surface of the fresh catalyst is between 60 and 150 m^2/g.
6) A process for the decomposition to N_2 and O_2 of N_2O present in the effluent from a unit for the production of nitric acid, characterized in that a catalyst composed of a mixed oxide of zirconium and of cerium in the form of a solid solution is positioned under the platinum gauzes of the reactor for the oxidation of ammonia.